

REMARKS

Pending Claims

Claims 1-13 are pending. Claim 2 has been canceled. Amendments to the claims are supported by the specification and the original claims. For example, amendments to claim 1 are supported, for example, by the disclosure on page 20, line 16-20; page 5, line 10; page 14, lines 10-16; and of Fig. 3 and by claim 2. No new matter has been added.

Claim 3 has been rewritten in independent form by incorporating claim 1. No new matter has been added.

Claims 14-17 have been added. Claims 14 and 15 are supported by the original claims. Claims 16 and 17 are similar to claims 8 and 9. No new matter has been added.

Claim Rejection – 35 USC §102

Claims 1-13 have been rejected under 35 USC §102(e) as being anticipated by Tokuhara et al. (Tokuhara). Applicants respectfully submit that the claimed invention is not disclosed, taught, or suggested for at least the following reasons.

Claim 1 recites as follows:

Claim 1 (currently amended): A method for manufacturing a sintered object, comprising:

- press-forming a raw material powder to obtain a green compact;
- placing the green compact on a sintering plate; and
- sintering the green compact,

wherein a difference between a shape and dimension of the green compact and a shape and dimension of a desired sintered object is gradually decreased in a predetermined direction; and

wherein the green compact is placed on the sintering plate so that the predetermined direction is oriented substantially toward an outer circumference of the sintering plate in plan view.

The bolded features above are not disclosed, taught, or suggested by the cited prior art, Tokuhara. That is, Tokuhara does not show press-forming a green compact such that a dimensional difference between the green compact and a desired sintered object (the object whose shape and dimension the green compact assumes after sintering) decreases along a predetermined direction, and placing this green compact on the sintering plate so that the predetermined direction is oriented substantially toward the outer circumference of the sintering plate in plan view.

In Tokuhara, the green compact 24 of a rare earth alloy magnetic powder is made by pressing the powder within an air environment that has a temperature controlled at 30 °C or less and a relative humidity controlled at 65% or less (column 2, lines 59-63). Tokuhara does not mention providing a green compact such that a dimensional difference between the green compact and a desired, target object decreases along a predetermined direction. For at least this reason, claim 1 is not anticipated by Tokuhara.

Furthermore, Tokuhara does not disclose or teach orienting the green compact so that the predetermined direction (i.e. the direction that the dimensional difference of the green compact and the desired object decreases in shape and size) of the green compact is oriented to point toward the outer circumference of the sintering plate. From Tokuhara's Figs. 1 and 2, it is clear that the green compacts 24 are loaded onto the sintering case 62 on a sintering case 60 in a matrix configuration without any consideration to the orientation of the green compact itself. For at least this reason, Tokuhara does not anticipate claim 1.

Claim 3 recites:

Claim 3 (currently amended): The method for manufacturing a sintered object, comprising:

press-forming a raw material powder to obtain a green compact;
placing the green compact on a sintering plate; and
sintering the green compact,

wherein the green compact is press-formed so that the density of the green compact made of the raw material powder is gradually decreased in a predetermined direction, and

wherein the green compact is placed on the sintering plate so that the predetermined direction is oriented substantially toward an outer circumference of the sintering plate in plan view.

(Emphasis added.)

At least the above bolded feature of claim 3 is not disclosed, taught, or suggested by the cited prior art reference.

As stated before, in Tokuhara, the green compact 24 of a rare earth alloy magnetic powder is made by pressing the powder within an air environment that has a temperature controlled at 30 °C or less and a relative humidity controlled at 65% or less. Tokuhara does not mention press-forming a green compact to provide a decreasing density gradient of the green compact made of the raw powder in a predetermined direction that is oriented substantially toward the outer circumference of the sintering plate. For at least this reason, claim 3 is not anticipated by Tokuhara.

Dependent claims 4 to 9 and 14 are also not anticipated at least for the same reasons as claim 1 and claim 3.

Claim 10 recites as follows:

Claim 10 (currently amended): An apparatus for aligning a green compact, comprising:
a conveyance mechanism for holding, conveying, and aligning a green compact;
a sintering plate on which the green compact is placed and aligned by the conveyance mechanism,
wherein the green compact is placed on the sintering plate so that a predetermined direction of the green compact is oriented substantially toward an outer circumference of the sintering plate in plan view.

The above bolded features are not disclosed, taught or suggested by the cited prior art reference. That is, Tokuhara does not disclose, teach, or suggest a conveyance mechanism that will place and align the green compact on the sintering plate such that the predetermined direction of the green compact is oriented substantially toward an outer circumference of the sintering plate, as set forth in claim 10. The alignment of the green compact is provided to take into account such factors as the non-uniform dimension or the density decrease of the green compact. Tokuhara simply places the green compacts 24 on a sintering plate in a matrix configuration and provides them to the

